

# A WORLD *without* BENEFIT *of* INSECTS



By Dr. Frank Thone

**D**ROWSY summer Sunday afternoon. The hammock under the apple tree looks inviting. May be something worth reading in the paper—kids got away with the funnies, but there's the magazine section left. Let's see something here about bugs mm

You have half decided to take a little snooze instead of going on reading, when your ankle begins to itch. Some adventurous mosquito has decided not to wait until dusk. Then a bumblebee zips by, doesn't like something about you, zips back again, a couple of times. And an acrobatic caterpillar slides down a cable of his own making, to drop right on the place where your hair used to be.

Confound all insects anyway! Whatever were they invented for, the crawling, biting, stinging nuisances? World might be a place halfway fit to live in if the whole lot of them could be wiped out.

And science says, at that, they may wipe us out instead. Well, let 'em! If there get to be many more of the cussed things about, the world won't be fit to live in, anyway. The doggone pests!

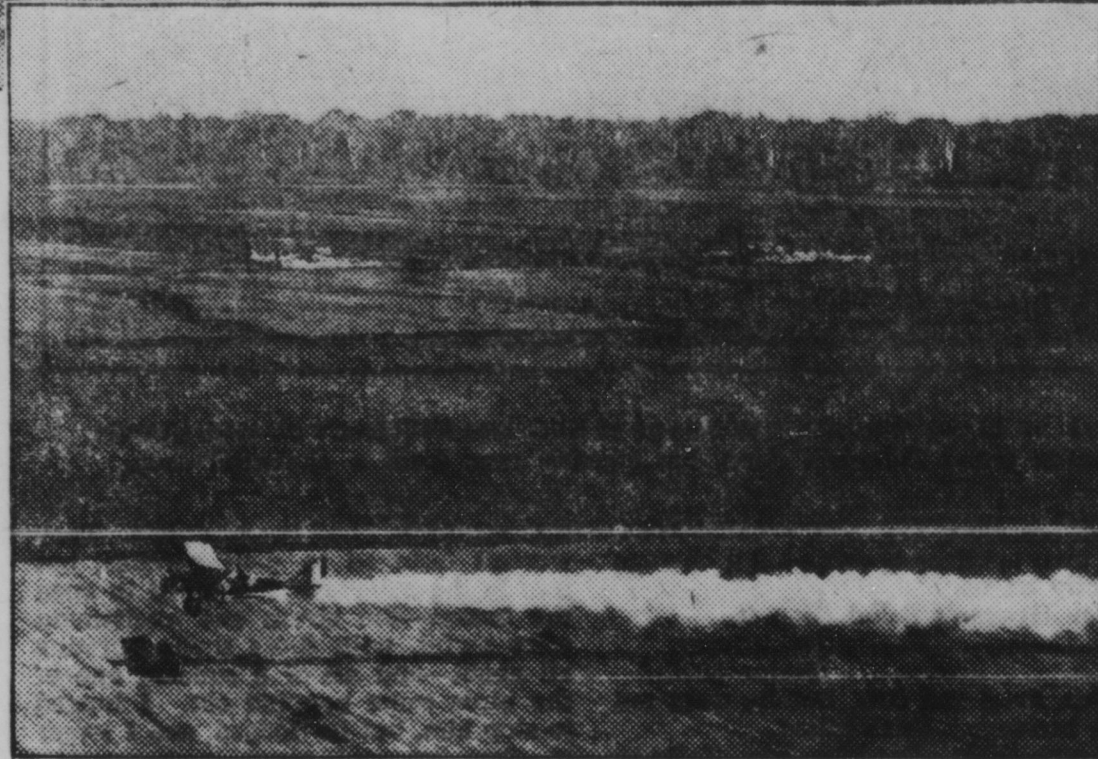
So you give up the hammock and go back to the safe fortification of the screened-in porch.

But would you be happy if all insects were wiped out? It's even a question whether you would be here at all. For though some insects pester man and loot his granaries and warehouses, other insects perform a long list of services for him. So many services indeed that without the insects, existence for man and the larger animals would be difficult, if not impossible.

And are the insects really threatening to wipe us out? Isn't there a chance that the tables may be turned, and we are in danger of wiping out some of the best friends we have in the insect world?

At least one prominent entomologist thinks there is a chance of that calamity happening. She is Dr. Edith M. Patch, who has just retired as head of the department of entomology at the University of Maine, after more than a generation of service in her science. She is honored widely by her colleagues. She has raised the question of what a world "without benefit of insects" would be like.

Of course Dr. Patch has no idea that all the insects of the world could be completely exterminated. Whales and elephants can be exterminated, but not insects. Yet even now the warfare we wage on harmful insects is killing uncountable millions of "good bugs" that happen to be occupying the same territory. It is just like bombing or burning a city occupied by the enemy—and also



An airplane spreading poison dust in the campaign against insect pests. It gets the pests all right—but it also kills the beneficial insects.

by friendly non-combatants, women, and children. Dr. Patch adduces plenty of witnesses from the ranks of entomologists to back up her own testimony.

**C**HIEF sufferer from spraying of fruit orchards seems to be our old friend the honeybee. The situation is ironic. Orchards must be sprayed to keep down the codling moth. The codling moth is the parent of that worm (or half-a-worm) that you find in your apple. If orchards weren't spray, codling moth larvae would worm their way into all apples, all pears, apricots, peaches, almonds.

So sprayers go through the orchard several times, dousing blossoms with arsenicals, for it is during and after blossom time that Madame Codling Moth comes to lay her eggs.

But bees, coming on their beneficial errands of pollen-transfer and honey-gathering, drink death with the nectar. Some never get home. Others reach the hive, but become paralyzed and die. The hive becomes too weak to feed its young, to resist disease, to defend itself against enemies.

In one part of the Pacific Northwest there was a regular tug-of-war between the spraying orchardists and the anti-spraying beekeepers. The orchardists insisted on spraying; they said they had to. The beekeepers pulled out of the orchard country and sought flowering pastures new. It wasn't just a sitdown strike. It was a walkout, with removal of an essential part of the apple-making machinery, the pollen-distributing bees.

Of course honeybees are not the only pollen-carriers for fruit trees, so orchardists may be able to thrive for a long time without them, depending on the assistance of the wild solitary bees, and other less important insects.

But it is quite likely that the spray poisons get them, too, so the dilemma is not solved, only postponed for a time.

Even more wholesale destruction is visited on insects when airplanes are used for spreading poison dusts over cottonfields to combat bollworm and weevil, and over forests to control gipsy and browntail moths. The areas covered are much larger, and the insect life, in the forests at least, forms a much more complex community.

Furthermore, in such a wholesale spreading of poison by such an indiscriminate blunderbuss as an airplane, a good deal of the lethal dust usually drifts into the surrounding woods and brushland, where it is not needed but where it kills hosts of insects and their larvae that are the food of nestling birds. In this kind of warfare the innocent bystanders get it in the neck.

Dr. Patch does not pretend to know



A helpful insect at work—a honeybee pollinating a fruit blossom.

When man exterminates such insect enemies as the grasshopper, he inevitably kills many "good bugs," including our old friend the honeybee.

the answer. The war against pests must unquestionably go on, she readily grants. But, she adds, "Perhaps no agricultural situation has ever presented a more serious dilemma. On the one hand, if we do not destroy enough of certain insects, they may ruin some of our crops. On the other hand, if we proceed to destroy too many insects, we shall have almost no crops at all except such as are wind-pollinated."

Dr. Patch champions insects not only for the material good they do us but for the pleasure and mental satisfaction we might get from a better knowledge of them.

"If we look backward a few centuries," she reminds us, "we recall that the entomological fellowship then numbered among its members priests—men with leisure for contemplation of the wonders they beheld.

"I have in mind one ancient book the pages of which are filled with richly tinted pictures lovingly painted by hand. And in the introduction the author speaks of his subject with reverence. He has been led, he says, to portray the marvels and beauties of insects 'for the glorification of God'—that men may the better appreciate the wonders of creation with which they are surrounded."

**T**HEN she looks to the year 2000, and imagines the meetings of some learned societies of that future day. By then the indiscriminate extermination will have done much of its deadly work, and many species will have gone to join auk and dodo. Conservationists will then be much concerned over means to ensure the survival of useful and beautiful insect species that are left in the world.

Dr. Patch takes us along to visit a committee meeting of scientists concerned with the relations between plants and insects, the Phyto-Entomological Society:

"Each member has before him an economic botany book to which he refers for the names of all the insect-pollinated flowers listed, together with the names of all insects known to pollinate each species. After noting those insects that are becoming too rare to be efficient, the committee recommends that favorable breeding places be provided for these insects throughout the regions where their services are needed, and that every effort be made to increase their numbers. These recommendations are to be published and distributed to all growers of the plants concerned."